

## CLAIMS

1. A device for determining the temperature of a flowable medium, wherein said medium flows through a duct with a cross-section, said device having a temperature sensor and a probe body, wherein said probe body has several elongated probe sections, wherein said probe sections extend into said duct, wherein said temperature sensor is arranged on said probe body with thermal contact.
2. A device according to claim 1, wherein said probe sections extend through said entire cross-section of said duct.
3. A device according to claim 1, wherein said probe sections are straight and parallel.
4. A device according to claim 3, wherein said probe sections are equidistant to one another.
5. A device according to claim 1, wherein said probe sections are rod-like.
6. A device according to claim 1, wherein said probe sections are spaced from one another with free gaps, said free gaps between two adjacent of said probe sections being roughly of the order of magnitude of the extension of said probe sections at right angles to a flow direction of said medium.
7. A device according to claim 1, wherein there is a flow cross-section for said medium through said probe sections and said probe sections have an end face in said duct, wherein said flow cross-section is roughly as large as the sum of said end faces of said probe sections in said duct.
8. A device according to claim 1, wherein said probe sections extend in said medium flow direction about the same as at right angles thereto.

9. A device according to claim 1, wherein on one side said probe body has a base member from which said probe sections project and said base member only extends slightly into said duct.
10. A device according to claim 1, wherein said probe sections are connected in one piece with said base member.
11. A device according to claim 10, wherein said probe body of said base member and said probe sections is entirely made in one piece.
12. A device according to claim 1, wherein said temperature sensor is located on said base member.
13. A device according to claim 12, wherein said temperature sensor is placed on said base member outside said duct.
14. A device according to claim 1, wherein said device is connected to a heater.
15. A device according to claim 14, wherein said heater has a heat transfer member extending into said duct.
16. A device according to claim 14, wherein said medium has a flow direction and said probe body is positioned downstream of said heater in said medium flow direction.
17. A device according to claim 1, wherein said temperature sensor is integrated into a heating element.
18. A device according to claim 1, wherein said heating element is a thick film element.
19. An arrangement of a duct with a cross-section for guiding a flowable medium and a device for determining the temperature of said medium, wherein said medium flows through said duct, said device having a temperature sensor and a

probe body, wherein said probe body has several elongated probe sections, wherein said probe sections extend into said duct, wherein said temperature sensor is arranged on said probe body with thermal contact.

20. A device according to claim 19, wherein said device is connected to a heater.

21. A device according to claim 20, wherein said heater has a heat transfer member extending into said duct.